

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A method for generating an image, comprising:  
receiving light associated with a plurality of spectral bands;  
repeating the following for each spectral band associated with the light:  
receiving an electrical signal at an electro-optical element;  
changing an optical property of the electro-optical element in response to the  
electrical signal to filter for a spectral band; and  
transmitting the spectral band to a sensor;  
sensing the spectral bands at the sensor;  
combining the spectral bands to generate a composite signal, wherein combining the  
spectral bands to generate the composite signal comprises:  
accessing a function of the spectral bands; and  
multiplexing the spectral bands in accordance with the function to combine the  
spectral bands, said function causing said spectral bands to be combined using at least one of:  
adding and weighted combining; and  
generating an image from the composite signal.
2. (Original) The method of Claim 1, wherein the electro-optical element  
comprises:  
a first layer sensitive to a first spectral band of the spectral bands; and  
a second layer sensitive to a second spectral band of the spectral bands, the electrical  
signal operable to activate the first layer and to activate the second layer.
3. (Original) The method of Claim 1, wherein the electro-optical element  
comprises:  
a first section sensitive to a first spectral band of the spectral bands; and  
a second section sensitive to a second spectral band of the spectral bands, the electrical  
signal operable to activate the first section and to activate the second section.
4. (Canceled)

5. (Original) The method of Claim 1, wherein the sensor is synchronized with the electro-optical element, the sensor being operable to sense a spectral band when the spectral band arrives at the sensor from the electro-optical element.

6. (Original) The method of Claim 1, wherein generating the image from the composite signal comprises:

receiving the composite signal, the composite signal associated with a plurality of display spectral bands;

repeating the following for each display spectral band associated with the composite signal:

sending a display electrical signal to a display electro-optical element;

changing an optical property of the display electro-optical element in response to the display electrical signal to filter for a display spectral band; and

transmitting the display spectral band to a display; and

displaying the display spectral bands at the display to generate the image.

7. (Currently Amended) A system for generating an image, comprising:  
a electro-optical element operable to:  
    receive light associated with a plurality of spectral bands;  
    repeat the following for each spectral band associated with the light:  
        receive an electrical signal;  
        change an optical property of the electro-optical element in response to  
the electrical signal to filter for a spectral band; and  
        transmit the spectral band to a sensor;  
a sensor coupled to the electro-optical element and operable to sense the spectral bands;  
an image processing module coupled to the sensor and operable to combine the spectral  
bands to generate a composite signal, wherein the image processing module combines the  
spectral bands to generate the composite signal by:  
    accessing a function of the spectral bands; and  
    multiplexing the spectral bands in accordance with the function to combine the  
spectral bands, said function selected from a list consisting of: an adding function, a dividing  
function, and a weighting function; and  
a display module coupled to the image processing module and operable to generate an  
image from the composite signal.

8. (Original) The system of Claim 7, wherein the electro optical element  
comprises:  
a first layer sensitive to a first spectral band of the spectral bands; and  
a second layer sensitive to a second spectral band of the spectral bands, the electrical  
signal operable to activate the first layer and to activate the second layer.

9. (Original) The system of Claim 7, wherein the electro-optical element  
comprises:  
a first section sensitive to a first spectral band of the spectral bands; and  
a second section sensitive to a second spectral band of the spectral bands, the electrical  
signal operable to activate the first section and to activate the second section.

10. (Canceled)

11. (Original) The system of Claim 7, wherein the sensor is synchronized with the electro-optical element, the sensor being operable to sense a spectral band when the spectral band arrives at the sensor from the electro-optical element.

12. (Original) The system of Claim 7, wherein the display module is operable to generate the image from the composite signal by:

receiving the composite signal, the composite signal associated with a plurality of display spectral bands;

repeating the following for each display spectral band associated with the composite signal:

    sending a display electrical signal to a display electro-optical element;

    changing an optical property of the display electro-optical element in response to the display electrical signal to filter for a display spectral band; and

    transmitting the display spectral band to a display; and

displaying the display spectral bands at the display to generate the image.

13. (Currently Amended) A logic for generating an image, the logic embodied in a medium and operable to:

- receive light associated with a plurality of spectral bands;
- repeat the following for each spectral band associated with the light:
  - receive an electrical signal at an electro-optical element;
  - change an optical property of the electro-optical element in response to the electrical signal to filter for a spectral band; and
  - transmit the spectral band to a sensor;
- sense the spectral bands at the sensor;
- combine the spectral bands to generate a composite signal by accessing a function of the spectral bands and multiplexing the spectral bands in accordance with the function to combine the spectral bands, said function causing said spectral bands to be combined using at least one of: adding and weighted combining; and
- generate an image from the composite signal,

wherein said medium is selected from the list consisting of: hardware ~~and software~~.

14. (Original) The logic of Claim 13, wherein the electro-optical element comprises:

- a first layer sensitive to a first spectral band of the spectral bands; and
- a second layer sensitive to a second spectral band of the spectral bands, the electrical signal operable to activate the first layer and to activate the second layer;

15. (Original) The logic of Claim 13, wherein the electro-optical element comprises:

- a first section sensitive to a first spectral band of the spectral bands; and
- a second section sensitive to a second spectral band of the spectral bands, the electrical signal operable to activate the first section and to activate the second section.

16. (Canceled)

17. (Original) The logic of Claim 13, wherein the sensor is synchronized with the electro-optical element, the sensor being operable to sense a spectral band when the spectral band arrives at the sensor from the electro-optical element.

18. (Original) The logic of claim 13, operable to generate the image from the composite signal by:

receiving the composite signal, the composite signal associated with a plurality of display spectral bands;

repeating the following for each display spectral band associated with the composite signal:

    sending a display electrical signal to a display electro-optical element;  
    changing an optical property of the display electro-optical element in response to the display electrical signal to filter for a display spectral band; and  
    transmitting the display spectral band to a display; and  
displaying the display spectral bands at the display to generate the image.

19. (Currently Amended) A system for generating an image, comprising:  
means for receiving light associated with a plurality of spectral bands;  
means for repeating the following for each spectral band associated with the light:  
receiving an electrical signal at an electro optical element;  
changing an optical property of the electro-optical element in response to the  
electrical signal to filter for a spectral band; and  
transmitting the spectral band to a sensor;  
means for sensing the spectral bands at the sensor;  
means for combining the spectral bands to generate a composite signal, wherein the  
means for combining the spectral bands to generate the composite signal comprises:  
means for accessing a function of the spectral bands; and  
means for multiplexing the spectral bands in accordance with the function to  
combine the spectral bands, said function selected from a list consisting of: an adding function,  
a dividing function, and a weighting function; and  
means for generating an image from the composite signal.

20. (Currently Amended) A method for generating an image, comprising:
- receiving light associated with a plurality of spectral bands;
  - repeating the following for each spectral band associated with the light:
    - receiving an electrical signal at an electro optical element, the electro-optical element comprising a first layer sensitive to a first spectral band of the spectral bands, and comprising a second layer sensitive to a second spectral band of the spectral bands, the electrical signal operable to activate the first layer and to activate the second layer, the electro-optical element further comprising a first section sensitive to a first spectral band of the spectral bands, and comprising a second section sensitive to a second spectral band of the spectral bands, the electrical signal operable to activate the first section and to activate the second section;
    - changing an optical property of the electro-optical element in response to the electrical signal to filter for a spectral band; and
    - transmitting the spectral band to a sensor;
  - sensing the spectral bands at the sensor, the sensor synchronized with the electro-optical element, the sensor being operable to sense a spectral band when the spectral band arrives at the sensor from the electro-optical element;
  - combining the spectral bands to generate a composite signal by accessing a function of the spectral bands, and by multiplexing the spectral bands in accordance with the function to combine the spectral bands, said function causing said spectral bands to be combined using at least one of: adding and weighted combining; and
  - generating an image from the composite signal by:
    - receiving the composite signal, the composite signal associated with a plurality of display spectral bands;
    - repeating the following for each display spectral band associated with the composite signal: sending a display electrical signal to a display electro-optical element, changing an optical property of the display electro-optical element in response to the display electrical signal to filter for a display spectral band, and transmitting the display spectral band to a display; and
    - displaying the display spectral bands at the display to generate the image.



21. (Previously Presented) The method of Claim 1, wherein said plurality of spectral bands comprises at least one spectral band of infrared light.

22. (Currently Amended) The system of Claim 7 [[1]], wherein said plurality of spectral bands comprises at least one spectral band of a visible spectrum and at least one spectral band of infrared light.